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ABSTRACT

One of five modules in the foundation series of the 16-module series designed to train vocational education curriculum specialists, this module is intended for use in classes or individual study arrangements at the preservice or inservice level by students with varying amounts of experience in vocational education. (These modules are revised versions of earlier study guides--see note.) Introductory materials include an overview, instructions to the learner, detailed list of behavioral goals and objectives, and resources needed to complete learning activities. The module is divided into three sections, each based on one of the goals. The first section describes vocational education's evolution; its changing definition; its relationship to general, career, postsecondary, and adult education; and impact of federal policy and legislation. The philosophic, economic, and sociological concepts underlying vocational education are considered in section 2. The third section focuses on data on enrollment and financial statistics. Each section follows a standard format: text, individual study activities, discussion questions, and group activities. A summary of the module follows. Appendixes include suggested responses to the study activities, a self-check, responses to the self-check, and recommended references. (YLB)

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VOCATIONAL EDUCATION CURRICULUM SPECIALIST

THE SCOPE OF VOCATIONAL EDUCATION

Module 2

U.S. DEPARTMENT OF EDUCATION
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THE SCOPE OF VOCATIONAL EDUCATION

Module 2

Jeanette D. Wheeler

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Introduction

Vocational education is not static; it continues to evolve in response to the economic and educational needs of the country. This module, therefore, is concerned with change over the last century and traces public vocational education from its modest beginnings in agricultural, mechanical, and domestic arts to its current scope encompassing highly technical fields and newly emerging occupations.

Although the discussions in this module may appear to be brief, the reader should bear in mind that this is an introductory module. In-depth material on major topics is provided in subsequent modules.

Overview

The first section of this module describes the evolution of vocational education, showing how the definition itself has changed since the beginning of the century. Vocational education is then discussed in terms of its relationships to general, career, postsecondary, and adult education. Federal policy and legislation have been a powerful impetus to broadening the scope of vocational education. That impact on contemporary vocational programs is described in the sections on special populations and on other federally sponsored training programs.

The second major section of the module briefly considers the philosophic, economic, and sociological concepts underlying the present-day structure of vocational education. Basic objectives and major contributions of vocational education are covered, and the section concludes with a look to the future.

In the third section, the text focuses on data that deal with enrollment and financial statistics. The information provides an overview of who the vocational students are, what occupational areas they are in, and where the money comes from to support those occupational programs and students.

Instructions to the Learner

The Self-Check items and possible responses to them are found in the appendices. These questions have two purposes. First, before you begin work on the module, you may use them to check quickly whether you have already learned the information in previous classes or readings. In some instances, with the consent of your instructor, you might decide to skip a whole

Goals and Objectives

Goal 1: Interpret the meaning and context of vocational education.

Objective 1.1: Describe how the definition of vocational education has evolved from 1917 to the present.

Objective 1.2: Define vocational education according to current legislation.

Objective 1.3: Explain how vocational education relates to general education.

Objective 1.4: Explain how vocational education relates to career education.

Objective 1.5: Explain how vocational education relates to postsecondary education in area or regional vocational centers, technical institutes, and community colleges.

Objective 1.6: Explain how vocational education relates to the education of special populations (handicapped, minorities, disadvantaged, mature students, women).

Objective 1.7: Explain how vocational education relates to training programs sponsored by other federal agencies (e.g., Department of Labor/CETA).

Goal 2: Examine the concepts and purposes of vocational education.

Objective 2.1: Describe the major philosophical concepts of vocational education.

Objective 2.2: Describe the major economic concepts of vocational education.

Objective 2.3: Describe the major sociological concepts of vocational education.

Objective 2.4: Define the three basic purposes of vocational education by providing examples of each one.

Objective 2.5: Explain the major contributions of vocational education to American society.

Objective 2.6: Provide a rationale for the need for vocational education in the future.

Goal 3: Analyze summary data on the growth, outreach, and financial support of vocational education programs.

Objective 3.1: Compare past and present data regarding the numbers and kinds of people served by vocational education.

Objective 3.2: Discuss current vocational education enrollment and enrollment trends at the secondary and postsecondary levels.

Objective 3.3: Describe vocational education enrollment by occupational areas and by sex.

Objective 3.4: Discuss the historical trends in financial support for vocational education.

Objective 3.5: Compare financial support for vocational education from federal, state, and local sources.

Objective 3.6: Compare financial support of vocational education at the different educational levels.

Resources

In order to complete the learning activities in this module, you will need information contained in the following publication:

Evans, R. N., & Herr, E. L. *Foundations of vocational education* (2nd ed.). Columbus, OH: Charles E. Merrill Publishing Co., 1978.

GOAL 1: Interpret the meaning and context of vocational education.

The Meaning of Vocational Education

Vocational instruction is as old as early civilization, but, for the purposes of this module, we shall begin the history of vocational education with the twentieth century. The concept of on-the-job training or apprenticeship was the principal training method for centuries, but formal vocational instruction, as viewed by modern society, became necessary to ensure a trained supply of labor to meet the occupational demands of an increasingly industrialized economy.

The strongest push for formal vocational instruction in the United States came from early federal legislation. In 1862 the Morrill Act (Land-Grant Colleges Act) supported training in agricultural and mechanic arts at the college level. But, population growth, the rise of the factory system, increased mechanization, and the lack of adequate training for workers in factories and on farms emphasized the need for public education for occupations that required less than a baccalaureate degree.

Historical Definitions of Vocational Education

With the passage of the Smith-Hughes Act in 1917 and subsequent legislation, the stage was set for both the definition and development of vocational education up to 1960. The major purposes of the Smith-Hughes Act were to promote vocational education, particularly in agriculture, trades, and industries; to cooperate with the states in preparing vocational teachers; and to regulate funding for those activities through annual congressional appropriations. In order to receive federal funds, each state had to: (1) create a board for vocational education; (2) prepare a state plan; (3) report annually to the federal Board of Vocational Education; (4) provide programs for public school students fourteen years of age and older; (5) finance facilities through state or local funds; and (6) make occupational entry the primary program goal.

Simply stated, the legal definition of vocational education under Smith-Hughes was narrowly defined as training at less than college level to fit individuals for useful employment. That definition changed only slightly with the passage of the George-Deen Act of 1936 (adding federal money for distributive occupations) and the George-Barden Act of 1946 (adding salaries of vocational counselors and research money). Naturally, the legal definition influenced the programs by limiting their focus to specified occupations. In addition, the federal funding procedures also limited the use of allotments to the reimbursement of instructors' salaries. These programs were broadened by the Vocational Education Act of 1963 to meet the changing needs of students and society.

The Vocational Education Act of 1963 resulted in broader goals for vocational programs, expanding the scope to include postsecondary (noncollegiate) education and all major occupational fields. Specific elements of the Act included the following provisions:

- Ten percent of the money appropriated for vocational education was to be used for research.
- Area vocational schools were to be established to extend training opportunities to students from small schools and districts.
- Work-study programs were to be provided to help students needing financial support.
- Students served were to include those who had completed or discontinued their formal education.

Two important features of the Act have had a long-term impact on policy and the continued improvement of vocational education. One section prohibited federal control of programs, and another established the Advisory Council on Vocational Education that would periodically review and report on programs and laws. In essence, the 1963 legislation visualized and defined vocational education as a growing and developing, rather than a static, educational effort to increase opportunities for a wide range of students in occupational areas not previously included.

The 1968 Vocational Education Amendments authorized expansion and increased flexibility to provide vocational education to all youth and adults in the nation. With the exception of Smith-Hughes, all previous vocational education acts were repealed. Vocational-technical education was a primary concern of the 1972 Education Amendments, especially in giving new

status to occupational education by establishing the Bureau of Occupational and Adult Education and expanding community college occupational programs. The 1976 amendments further specified target populations for vocational programs, particularly to promote equal access to all vocational programs for both males and females.

Specific provisions of the 1968, 1972, and 1976 amendments will be discussed in detail in the module in this series that deals with legislative mandates for vocational education. For our present purposes in defining vocational education as it now stands, we are concerned with the priorities specified by those recent amendments. They clearly define and control the state role in the allocation of funds to assist disadvantaged students, create innovative and exemplary programs, and develop new programs on the basis of local manpower needs assessments.

Current Definitions of Vocational Education

Broadly defined, vocational education is that part of education that makes an individual employable in a particular occupational field. It is any educational program below the professional or baccalaureate level that prepares learners for entrance into a chosen vocation, that upgrades employed workers, or that retrains workers for new occupations. Vocational programs include the major divisions of health, home economics, business, distributive education, technical, trade and industrial, and agricultural education. Training is carried out in public comprehensive and vocational high schools, technical institutes and community colleges, area vocational schools, adult education programs, and regional occupational centers.

Vocational education is not an independent entity, however, but an integral part of general education. In fact, the growth of new and emerging occupations and the need for training and retraining adults make vocational education an equal partner in lifelong learning and in career education. The broader definition, therefore, encompasses many aspects of formal and informal education throughout life.

The Context of Vocational Education

Any definition of vocational education stresses its interrelationship with all other forms of education and emphasizes the need for more than simply developing occupational skills and competencies in students. Vocational education, therefore, has definite relationships to general education, career educa-

tion, adult and continuing education, special education, and technical training programs.

Vocational Education and General Education

Both are equally essential for job success and should be mutually supportive. General education, which includes competency in language and communication skills, basic math, and the development of effective work attitudes and interpersonal relationships, significantly increases a person's potential for gaining and retaining a job. Employers continue to look for employees with good work habits who can read, write, express themselves well, do basic math, and get along with others on the job. In fact, some employers have stated that much of the training in specific skills can be done by them on the job if all those other competencies exist! Those "other competencies" are in the domain of general education and must be an integral part of vocational education programs.

Vocational Education and Career Education

The career education movement of the 1970s has resulted in a variety of definitions and a dilemma concerning the relationship of career education to vocational education. They are so interrelated that they seem difficult to separate, especially since both career and vocational education emphasize the preparation of students for work. Career education, however, is more comprehensive and includes many developmental levels. Awareness of the world of work and the development of attitudes that will expand career options begins in early childhood; orientation and exploration occurs during early adolescence; and preparation and development of skills takes place in high school. The latter is the realm of vocational education, which serves as the primary method for preparing students for occupations.

Since career development is now considered a lifelong process, the need for work awareness, orientation, exploration, and vocational preparation is cyclical, becoming necessary at different times in people's lives. One of the purposes of career education is to provide occupationally oriented education at different times in people's lives and at all different levels of education.

Vocational Education and Postsecondary Education

The rapid growth of community colleges and technical institutes has been due, to a large extent, to the increased need for people skilled in various technologies. Training in secondary schools is not usually long enough to cover the complex technology of the electronics or computer industries, for example. Postsecondary institutions, public and locally controlled, have provided the means for many hundreds of thousands of adults to gain the skills to obtain jobs beyond the entry level. Many junior and community colleges have strong occupational programs, offering certificates of competency and associate degrees.

With the legislative acts and amendments of 1963 and 1968, area vocational centers (technical training institutions) have assumed an important role in training both secondary and postsecondary students. Although they do not usually offer degree credit, they teach skills enabling students who complete their instructional programs to earn certificates of completion.

For years, training for adults has been offered through adult vocational education programs, usually during evening hours at local high schools. The definition of postsecondary vocational education, therefore, encompasses any training programs open to students 18 years of age or older, whether the programs are held in high schools, technical institutes, area vocational schools, or community colleges. It is interesting to note that the average age of community college students has risen to the late twenties, as opposed to the traditional late teens. This may, in part, be due to the retraining of adults who are making mid-career changes or who are preparing to reenter the skilled and semi-skilled job market. One indicator of the growth of postsecondary vocational education is that 60 percent of federal money going into vocational education now funds postsecondary training while 40 percent goes to secondary level programs.

Vocational Education and Special Student Populations

Legislation resulting from the civil rights movement of the 1960s affected vocational education for special student groups. The various acts and executive orders were first related to equal pay and equal employment opportunities, but the educational legislation passed subsequently established clear priorities for special groups. Vocational education opportunities for women, the disadvantaged, limited-English-speaking, and handicapped are spelled out in a series of national priority programs.

The Vocational Education Act of 1963 authorized programs for people of all ages and abilities, but it gave special attention to those with handicaps. The amendments of 1968 stressed special populations, particularly by prescribing state funding allotments for programs for the handicapped and disadvantaged. It is significant that between 1972 and 1977 the number of students with special needs enrolled in vocational classes increased almost 25 percent. Provisions for disadvantaged, Native Americans, and migrant workers were also strengthened in the 1972 amendments.

Finally, the Education Amendments of 1976 addressed the needs of the populations named above and emphasized the role of the federal and state governments in overcoming sex discrimination and stereotyping in vocational education programs. There is no question that vocational education has been in the forefront in developing, funding, and carrying out educational and training programs that meet the diverse needs of special subpopulations of students.

Vocational Education and Federal Training Programs

Specific regulations dealing with coordinating manpower training programs and public vocational education programs were designated in the 1976 amendments. Annual and five-year state plans had to show the results of such coordination efforts, to ensure both that duplication of training in local areas would not occur and that all youth and adults were being adequately served. In addition, data were to be gathered from both vocational education and CETA (Comprehensive Employment and Training Act) training programs reporting occupational information such as numbers of students served by race and sex, completing programs, and placed; types and numbers of programs offered; and staff, facilities, and expenditures.

Individual Study Activities

1. Because the preceding narrative provides only a brief overview of the meaning and context of vocational education, it is expected that the reader will augment that information with readings from:

   - Evans, R. N., & Herr, E. L. Foundations of vocational education (2nd ed.). Columbus, OH: Charles E. Merrill Publishing Co., 1978, pp. 47-59.

2. In addition to the above, several basic texts provide an in-depth treatment of the history and scope of vocational education. You might be interested in reading the following sections:

   - Bailey, L. J., & Stadt, R. Career education: New approaches to human development. Bloomington, IL: McKnight Publishing Co., 1973, pp. 169-232.

   - Thompson, J. F. Foundations of vocational education: Social and philosophical concepts. Englewood Cliffs, NJ: Prentice-Hall, Inc., 1973, pp. 27-55.

3. Each member of your class should interview a vocational educator. If possible, each educator interviewed should represent a different occupational area, educational level, or professional level. For example, you might interview a business teacher from a vocational high school, an instructor in agriculture from a community college, or the local district director of vocational education. Ask each educator to respond to questions you have as well as to the following questions:

   - How would you define vocational education?

   - What do you think are the major objectives of vocational education?

   - How do you feel vocational, general, and career education relate (or should relate) to each other?

   - How do you see vocational education serving the needs of special population groups?

4. Compare the historical definition (under Smith-Hughes) of vocational education with the current definition of vocational education by listing the major points of both.

5. How does vocational education relate to general, career, and postsecondary education? Mention at least two major

points for each. (For example, vocational education and general education are both necessary to job success.)

Discussion Questions

1. How would you define vocational education? How does your definition differ from that of the 1917 Smith-Hughes Act?

2. Describe the relationship in your own school (or in one with which you are familiar) between vocational and general education programs. Do you feel that providing skills such as basic math should be the responsibility of vocational education?

3. How does career education relate to vocational education? Discuss the similarities and the differences between them.

4. Do you think the legislative mandates in the areas of sex equity and handicapped put too much pressure on vocational education to change too quickly?

5. What should be the major purposes of "schooling" in general and vocational education in particular?

Group Activities

1. Using the responses obtained in Item 3 of the Individual Study Questions, compile a class list of results of the interview questions. How are the responses similar and how are they different? Do instructors within the same occupational area or at the same educational level tend to feel the same way about each item?

2. If possible, form two- or three-person teams from the same schools (or teams made up of people from the same level or subject area). Each team should develop a brief questionnaire to be administered to a small sample (five to eight) of vocational educators within their own schools or districts. You may want to use some of the items discussed in Item 3, Individual Study Activities, but each questionnaire should have from 10 to 15 questions that can be answered briefly. Tally the responses and share the results with the class. A suggested format might be as follows:

Title of Respondent	Occupational Area
_____	_____

Think about the policies, practices, and programs relating to vocational education in your agency or institution.

1. What efforts have been made to coordinate DOL/ CETA youth training programs with your school's or district's vocational programs?

1	2	3	4
None	Planning Stage	Informal Collaboration	Fully Implemented

2. How well articulated are the secondary and post-secondary occupational programs in your city, county, or district?

1	2	3	4
None	Planning Stage	Informal Collaboration	Fully Implemented

3. Are basic skills in general education programs (reading, basic math, etc.) integrated with your vocational programs?

1	2	3	4
None	Planning Stage	Informal Collaboration	Fully Implemented

These items are simply suggested; you and your team members may want to devise a questionnaire that is more specific to your own region, but that still relates to the content covered in this section of the module.

3. This activity is designed to be a group role-playing situation to decide what the major purpose of "schooling" should be.

Step 1: Divide the class into six groups. Group 1 will represent a citizens' committee with participants from all levels of the community--professionals, skilled workers, educators, lay persons, etc. Their task is to decide upon the major purpose of schooling from a comprehensive viewpoint. Group 2 will represent a committee of vocational educators who must decide on the purpose of schooling from their point of view. Group 3 will represent a group of general educators (science, art, English, etc.) who must decide on the purpose of schooling from the general or academic viewpoint. Group 4 will represent a group of students who will decide on the purpose of schooling from the standpoint of those who are intended to be the primary beneficiaries of the systems. Group 5 will represent a parent's committee who must decide on the major purpose of schooling from the parents' point of view. Group 6 will represent a school board. The board members' task is to decide upon the major purpose of schooling from a typical school board's point of view.

Step 2: Class members may do research to prepare for their discussion and decision at the next class session, or they may come to a conclusion after a discussion during the same class period.

Step 3: Ask each group to present its conclusion to another group. These two groups must then negotiate a conclusion that is satisfactory to both groups. All groups should have an opportunity to react with one another. Recorders should compile the different conclusions reached by their groups.

Step 4: The instructor might collect and compile the conclusions and present them to the class for discussion. If possible, a single comprehensive statement of purpose might be determined!

GOAL 2: Examine the concepts and purposes of vocational education.

Concepts and Purposes of Vocational Education

Most educators agree that the birth of the public vocational education movement occurred in 1917 with the passage of the Smith-Hughes Act. This act reflected fundamental concepts rooted in educational philosophy, economic theory, and the sociology of work.

Philosophical Concepts of Vocational Education

Most often the rationale for formal education is to transmit the prevailing culture from one generation to the next, but what is usually meant is the transmission (or teaching) of organized disciplines. Vocational educators, for the most part, have maintained that schools should serve both the students who are college bound (academic disciplines) and those who move into the work world (vocational disciplines). The need for practical, work-oriented education has been voiced by supporters of vocational education as well as by the public and by advocates of general education.

As early as 1918, educational leaders identified career development as a major educational objective. The Commission on Reorganization of Secondary Education determined that "a good citizen earns his living, contributes to the general welfare by working, and maintains desirable relationships with fellow workers." Twenty years later the National Education Association listed "economic efficiency" as one of the four major school objectives, stating that schools were responsible for developing individuals who could select their vocations, plan their economic lives, and understand the requirements of their vocations.

Over the next few decades, statements similar to the above continued to be issued by various groups and educational leaders. In 1973, after an extensive survey of educational goals, the Phi Delta Kappan (September 1973) presented a list of 18 goals of education. Among the goals were four that

relate directly to career development and vocational education. These are:

- develop pride in work and a feeling of self worth
- learn to respect and get along with people with whom we work and live
- gain information needed to make job selections
- develop skills to enter a specific field of work

Economic Concepts of Vocational Education

From its inception, public vocational education has been concerned with the needs of society and of the labor force. The focus of vocational education has shifted from providing skilled workers for employers to the educational development of individuals. Although economic forecasts and labor market trends are still an integral part of planning for vocational programs, the benefits of education to students and workers are gaining importance.

Vocational educators must also be concerned with shifts in the economy in developing programs. For example, with the growth of service industries--government, finance, real estate, public utilities, and transportation--and the decrease in heavy manufacturing and goods-producing occupations, the use of human resources is changing. The increased rate of women working for longer periods of their lives also influences the economic and occupational structure.

Sociological Concepts of Vocational Education

The values of work to the individual and to society have been widely accepted by government, business, educators, and most citizens. Recently, however, those values, and the work ethic itself, have been questioned by increasing numbers of people. The disenchantment with work as a primary function of an individual's life and as a determinant of the quality of life may have been a result of education's inability to resolve social problems. Certainly, educational institutions cannot be expected to eliminate juvenile delinquency, unemployment, youth alienation, adult crime, and so on. Yet, the fact remains that earning a living is still an intended outcome of schooling. Educators need to understand that an individual's social class, racial or ethnic background, age, and sex influence his or her occupational aspirations.

Basic Purposes of Vocational Education

The three basic purposes of vocational education discussed in this section are widely accepted by public school agencies as the focus for curriculum development. The same basic areas can be related to broad goal statements at the state and national levels. The areas include: (1) meeting society's needs for workers; (2) increasing the options available to each student; and (3) serving as a motivating force to enhance all types of learning.(Evans & Herr, 1978)

(1) To meet society's needs for workers. This purpose is the earliest and most widely accepted in vocational education and has been included in vocational education legislation since 1917. When curriculum planning or revision is considered, this purpose is critical because it determines whether training will result in employability. Therefore, continued efforts toward more accurate manpower forecasting, as well as increased follow-up efforts, must be made. In addition, curriculum developers should be aware of their responsibilities in serving the needs of special target groups who are becoming an increasingly larger part of the manpower pool. Business and industry are seeking trained and qualified women and men, minorities, and handicapped people; vocational education's role is central to building that available pool.

(2) To increase the options available to each student. Meeting the needs of people rather than the manpower needs of society is being emphasized more today than ever before. This purpose is being reinforced by the career education movement and has its foundation in the psychology of human development and learning. Relationships between personal characteristics of learners and occupational adaptability will grow increasingly important as new fields of employment emerge. Increasing occupational options has significance for vocational guidance practices as well. For example, instructors and counselors will need to encourage more students to consider entering occupations that are nontraditional for their sex.

(3) To serve as a motivating force to enhance all types of learning. Education has long been criticized for streaming or tracking learners into single-purpose courses of study. Hand in hand with widening options should be the practice of encouraging general and academically oriented students to consider exploring vocational programs. Conversely, vocational students need

the basic skills provided by general education courses. For example, math competencies in fractions, decimals, and the metric system are critical to successful employment in most trades. The connection between reading, writing, and oral communication must begin early in the educational process and can be made relevant to vocational goals. Many states and local districts are now concerned that their students lack the vital competencies--skills for personal use--for success in living on their own. Vocational education can expose students to other types of learning through exploratory courses, hands-on experiences, and survival skill programs. Many vocational educators feel that college-bound students can also benefit from vocational training that provides them with skills necessary for successful living as well as with skills that allow them to support themselves during their college years.

Contributions of vocational education. The contribution of vocational education from its early years has generally been considered the development of job skills to meet the labor needs of society. That remains a basic contribution, of course, but social and legislative changes throughout the last half century have caused vocational education to be responsive to many occupational and societal needs.

The land-grant colleges created under the Morrill Act of 1862 have emerged as advanced professional schools chiefly in agriculture and engineering. Over the years, most of these institutions have expanded their programs of higher education to become much broader than any envisioned by the Act itself. Most of the institutions have become part of state university systems.

The unique nature of vocational education has had a major impact on teaching methodologies and educational strategies. Individualized and competency-based learning are but two techniques used by vocational instructors long before they were commonly used in other classrooms. Cooperative education and the use of local advisory committees are two strategies that were forerunners in the movement to facilitate the transition between education and work. The issue of accountability is one more contemporary concept dealt with by vocational educators in their emphasis on placement and follow-up. The strength of the youth organization movement (e.g., vocational clubs) and its reinforcement of in-school learning through out-of-school activities has been an additional contribution of vocational education.

The future of vocational education. With the passage of recent legislative provisions that focus on special population groups, vocational education is already addressing contemporary problems. Programs are also being developed that will enable vocational education to help improve the quality of our environment, assist in urban rebuilding, promote energy conservation, and develop better mass transportation. Vocational education should also continue to provide:

- high school graduates with marketable skills;
- adolescents with actual work experience as part of the career decision-making process;
- women, minorities, and disadvantaged students with skills that will enable them to enter a greater variety of occupations;
- handicapped students with better education and placement; and
- individuals with retraining required for highly technical occupations.

Individual Study Activities

1. For each of the three widely accepted purposes of vocational education, state one philosophical concept, one economic concept, and one sociological concept that supports that objective. Evans and Herr, pp. 63-127, provide added information and background on the concepts underlying vocational education.

2. Select the statement about the contributions and potential contributions of vocational education that you feel is most important. Support your reason for selecting that statement in a brief paper.

   - Vocational education will likely have a significant role to play in reducing crime.
   - Vocational education has responded to the national need to reduce unemployment.
   - Vocational education has reduced underemployment and unemployment.
   - Vocational education has responded to training people for new and emerging careers in health, environmental technologies, conservation, and space technology.
   - Vocational education has been a valuable source for training future employees of business and industry.
   - Vocational education is likely to assist more women to enter higher paying occupations in nontraditional occupational roles.
   - Vocational education will likely have a significant role in training and placing handicapped persons in gainful employment.
   - The use of advisory groups, placement and follow-up techniques, and cooperative work experience programs has been a major contribution of vocational education to instructional methodology.
   - Vocational education will likely have a significant role in introducing students to the career option of small business ownership.

Discussion Questions

1. Do you feel that the "work ethic" no longer is a primary motivating factor for the youth of today? Give examples that support your opinions.

2. Have formal education in general and vocational education in particular been saddled with responsibilities that are impossible to achieve? For example, can schools really cure the social and economic ills of the nation by eliminating or reducing unemployment, lowering youth crime rates, etc.?

3. Discuss the benefits and drawbacks to the proposal that every high school graduate should have a marketable skill. What effect might this proposal have on existing high school vocational programs?

4. In your opinion, what is the most important outcome of an effective vocational program--to meet the labor needs of society or to meet the human development needs of the individual? Can one outcome result without the other?

5. What future contributions of vocational education should be emphasized in planning new programs? In your discussion, consider the occupational areas that would need to be involved in training students to be employed in such efforts as urban rebuilding or energy conservation systems such as mass transit.

Group Activities

Debate the following statements made by knowledgeable and experienced educators. Divide the class into groups of two or four and allow each group to determine who will represent the pro and con for each statement. Each group should research the issues they will be debating and be prepared to rebut the opposition. By setting exact time limits it should be possible to cover these topics in a single class period.

1. Local directors of vocational education should not accept responsibility for Department of Labor-sponsored Youth Employment and Training Programs because they interfere with existing cooperative education programs.

2. Vocational education should be able to guarantee employment for all successful program completers.

3. Developing reading, writing, and computing skills should be completely in the domain of general education so that the academicians and vocational educators need not be responsible for upgrading student skills.

4. The majority of workers do not obtain personal fulfillment from their jobs.

5. Vocational education should continue to be viewed as a program for high school students who aren't going to college or who are more proficient with their hands than with their heads.

6. Secondary school vocational programs should be more general so that students can be prepared to enter not one but many occupational areas.

7. Most vocational education programs for older youth and adults should be conducted in postsecondary, rather than secondary, institutions.

You may also want to consider debating topics or issues that are more specific to your particular region of the country or to the educational level of your institution.

GOAL 3: Analyze summary data on the growth, outreach, and financial support of vocational education programs.

Current Enrollments and Trends

As vocational education has expanded over the years in its scope and mission, it has also continued to grow in enrollment and financial support. Vocational education serves broad categories of people representing wide age spans and varied backgrounds and abilities.

In-School and Out-of-School Students

The in-school group includes students in comprehensive and vocational high schools, area vocational schools, technical institutes, and community colleges. This in-school group ranges in age from the mid-teens to those mature students in adult education and postsecondary classes. The group varies greatly in academic ability and includes the handicapped, socioeconomically disadvantaged, functionally illiterate, non-English-speaking, military personnel, and incarcerated learners. Most of these students are preparing for a place in the labor force at entry or advanced levels, depending upon whether the student is in a secondary or postsecondary institution. The variations in the work experience of students are also broad, especially when one considers that career changes are becoming increasingly common.

The out-of-school group consists of all members of the work force, both the employed and the unemployed. The employed need vocational training to keep up with the technology of their occupations, to maintain occupational mobility by expanding their knowledge and skills, and to retrain for new occupations, either within the same or different areas. The unemployed need vocational education in order to enter or to reenter the work force. Again, the occupational programs take many forms and include apprenticeships, on-the-job training, and a diverse group of private and public training programs. Many major businesses and industries now provide a broad offering of classes and programs that rival public education in their variety.

Secondary and Postsecondary Enrollments

Table 1 shows the growth of enrollment in all federally aided vocational programs from 1966 to 1977, by level and by type of program.

TABLE 1

Enrollment in Federally Aided Vocational Education Classes, by Level and by Type of Program: United States and Outlying Area, Fiscal Years 1966 to 1977

Level and Type of Program	FY 1966	FY 1970	FY 1974	FY 1977
ALL PROGRAMS	6,070,059	8,793,960	13,794,512	16,464,178
Secondary	3,048,248	5,114,451	8,628,417	9,892,035
Postsecondary	442,097	1,013,426	1,596,942	2,363,144
Adult	2,530,712	2,666,083	3,569,153	4,208,949
Special needs	49,002	920,603	1,846,275	2,300,052
Agriculture	907,354	852,983	976,319	1,056,259
Distributive	420,426	529,365	832,905	966,156
Health	83,677	198,044	504,913	740,520
Home Economics	1,897,670	2,570,410	3,702,684	4,163,609
Office	1,238,043	2,111,160	2,757,464	3,273,049
Technical	253,838	271,730	392,887	519,537
Trades and Industry	1,269,051	1,906,133	2,824,317	3,246,688
Other	--	354,135	1,803,023	2,498,360

Source: National Center for Education Statistics, Digest of Education Statistics, 1979

The total number of students enrolled in vocational education courses has steadily increased over the years. The greatest change in enrollment trends is the increase in postsecondary students with enrollment at the secondary level remaining constant at about 25 percent of all secondary students each year. The types of people served by vocational education have also expanded. Vocational educators have become more concerned with designing and adapting programs and courses to ensure that older students, handicapped persons, minority groups, and the disadvantaged (both economically and educationally) can benefit from the instruction offered.

Enrollments by Occupational Program Areas

Enrollment data for 1976 in each of the seven major occupational areas by sex are presented in Table 2. It will be extremely interesting to look at these same categories over the next few years to determine the impact of the 1976 amendments. In particular, as more schools institute active recruitment programs to encourage students to enroll in nontraditional occupational areas, the trends that are barely apparent now should tend to grow. For example, Table 2 shows a substantial increase in the rate of female enrollments in agriculture. Will this continue even though the overall growth pattern in agriculture is not increasing rapidly? Total female enrollment in all vocational programs in 1976 was 7,750,135, or 51.2 percent of the total, and increased from 48.3 percent in 1975.

Trend data are especially interesting but, unfortunately, not all states have gathered the same kinds of data or used the same definitions for their reporting over the years. Recent changes in reporting data to the federal government should result in more comprehensive and reliable information within the next few years. Accurate data collection becomes increasingly important in determining programs to expand or delete; in planning for long-range growth; in assessing program accountability; and in disbursing funds equitably.

TABLE 2

Trends in Female and Male Enrollments in Vocational Education by Percent

	1969		1976	
	Female	Male	Female	Male
Agriculture	2.0	98.0	11.3	88.7
Distribution	44.5	55.5	48.0	52.0
Health	92.2	7.8	78.7	21.3
Consumer and Homemaking	95.5	4.5	83.2	16.8
Occupational Home Economics	86.7	13.3	84.7	15.3
Office	78.0	22.0	75.1	24.9
Technical	8.7	91.3	11.3	88.7
Trades and Industry	11.1	88.9	12.7	87.3
Special Programs	41.0	59.0	33.3	66.7

Source: Bureau of Occupational and Adult Education, 1977

Table 3 summarizes the placement and follow-up data for vocational education students completing school prior to 1976. Completers of postsecondary programs are more likely to be employed in their area of training than students who have completed only a secondary program.

TABLE 3

Follow-Up of Program Completions in Vocational Education

Fiscal Year 1976

	Total, All Programs		Secondary		Postsecondary		Adult (Preparatory)	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Completed Program Requirements	2,149,900	100.0	1,378,012	100.0	537,363	100.0	234,525	100.0
Available for Placement	1,183,784	55.1	720,641	52.3	338,326	63.0	124,817	53.2
Not Available for Placement	532,978	24.8	439,472	31.9	64,070	11.9	29,436	12.6
Status Unknown	433,490	20.1	218,254	15.8	134,964	25.1	80,272	34.2
Not Available for Placement	532,978	100.0	439,472	100.0	64,070	100.0	29,436	100.0
Continued Full-Time School	381,106	71.5	331,790	75.5	33,884	52.9	15,432	52.4
Other Reasons	151,872	28.5	107,682	24.5	30,186	47.1	14,004	47.6
Available for Placement	1,183,784	100.0	720,641	100.0	338,326	100.0	124,817	100.0
Employed in Field Trained or Related (Full-Time)	762,179	64.4	421,108	58.4	257,322	75.9	83,839	67.2
Other Employment	299,749	25.3	212,856	29.6	57,043	16.8	29,850	23.9
Unemployed	121,856	10.3	86,677	12.0	24,051	7.1	11,128	8.9

Source: Bureau of Occupational and Adult Education, Summary Data, Vocational Education, FY 1976

Financial Support for Vocational Education

Along with the expansion of programs and growth of numbers of students served, vocational education has also experienced a highly predictable increase in expenditures from all sources. Table 4 summarizes the total federal, state, and local expenditures over a 15-year span.

TABLE 4

Expenditures for Vocational Education by Source

Fiscal Year	Federal	State/Local
1960	45,313,236	193,498,528
1965	156,936,015	447,709,712
1970	300,000,000	1,514,000,000
1974	468,196,893	2,965,622,640
1976	518,523,000	4,196,786,000

Source: Bureau of Occupational and Adult Education, Summary Data, Vocational Education

Over 4 1/2 billion dollars from all sources were expended for FY 1976, an increase of 16.8 percent over FY 1975, with 11.5 percent being federal monies and 88.5 percent from state and local funds. For each dollar of federal funds expended, the average state expenditure was $7.68. State expenditures vary from $33.62 to $1.37 for every federal dollar expended.

Individual Study Activities

Because enrollment figures and funding level data change constantly, the best sources of current information will be periodicals, journals (AVA), newspapers, and source books from the National Center for Educational Statistics (The Condition of Education and The Digest of Educational Statistics) and from the Office of Vocational and Adult Education (Summary Data).

1. To do this activity you will need to be able to obtain the enrollment figures for vocational programs offered over the last five or ten years by your school or district or any local school or district. Make a table showing trends in enrollment by occupational program area, by sex, and by special target populations (disadvantaged and handicapped). All of these characteristics may not be available in your particular region, but use the ones that are. How do your enrollment data compare with national data; on which characteristics are they similar and where do they differ?

2. To do this activity, you will need to obtain the expenditures for your district's vocational programs and summarize those data in the same ways that you did for the above activity. Some of the information may be available from the local district office or from annual or five-year plans for the district. Again, compare the available local data with the national figures.

Discussion Questions

1. Discuss the implications for the changes in enrollments and in expenditures shown in the tables of this section. Do you feel federal legislation has affected enrollments, in what ways, and with what groups of students?

2. Under most of the earlier vocational education legislation, states received a specified allotment for each service area according to population, and until 1963 nearly all funds had to be used to reimburse salaries. Discuss the constraints those procedures placed on adjusting vocational programs to student and social needs.

3. Consider the changes in funding procedures resulting from the Amendments of 1968. Statewide matching was approved and categorical funding for occupational areas was eliminated. Discuss how those amendments allowed states greater flexibility in planning programs that assured programming for student needs.

4. Goal 3 of this module describes vocational enrollment and expenditures on a national basis. Sometimes these national statistics are not as meaningful as they might be to vocational educators who fail to relate them to their own experiences and information dealing with enrollment and expenditures on a local level. The purpose of this exercise is to help students relate national trends in enrollment and expenditures to their local situation. This activity may be oral or written.

   Step 1: Ask students to list (or name) all the different kinds of people their particular vocational classes have served. (If students have not yet had teaching experience, ask them to recall the different kinds of people enrolled in the vocational classes in which they have participated.)

   Example: During my experience as a business education teacher, I have had many different kinds of students in my classes such as adults (24-40 years in age); older adults (over 40 years in age); young adults (18-25 years in age); high school dropouts; academically oriented students; vocationally oriented students; physically handicapped students, etc.

   Step 2: After students have listed (or named) a number of characteristics associated with their enrollments ask them to discuss or briefly summarize in writing the following points:

   - How do their enrollments compare with the picture of national enrollment (see Tables 1 and 2)?
   - How were their vocational programs able to help different people achieve their objectives?
   - How were their vocational programs limited in helping various people achieve their objectives?
   - How did expenditures or lack of expenditures for these programs affect the outcomes?

5. The purpose of this activity is to help students analyze enrollment and expenditure statistics presented in the tables in this module. The instructor should also use tables from other sources, making overlays for projection.

Step 1: After selecting appropriate tables, the instructor should compile a list of questions that will help students understand the significance of the various tables.

Example:

- How do local expenditures compare to state expenditures?
- How do local and state expenditures compare to federal expenditures?
- How do expenditures for secondary programs compare to expenditures for post-secondary programs?
- What percentage of people who have completed vocational programs are placed in full-time employment?
- What spending trends (or priorities) have been demonstrated from 1960 to 1976?

Step 2: Then ask students to discuss comparable data from their own districts. (Compiling such data will have been done for the individual study activities for this goal.)

Summary

This introductory module has painted a broad picture of vocational education by presenting a brief history, the theoretical bases, and an overview of student enrollment and governmental expenditures for vocational education.

The modern history of vocational education has been strongly affected by the legislative process. The history began with the establishment of land-grant colleges to develop collegiate level education in agricultural and mechanic arts, and continued with the Smith-Hughes Act of 1917 that addressed the training of students in secondary schools and strongly influenced subsequent legislation. Recent history focused on the special needs of the disadvantaged and handicapped as provided for in the 1963 law, and concluded with the amendments of 1976 that specifically dealt with the issue of sex equity.

As the legislative emphasis changed and expanded over the years, so did the sociological and economic concepts under which programs were developed. The trends in new curricula were clearly adding to and expecting far more of vocational education than merely skills training to make people employable. General, adult, and career education have become connected with vocational education, blurring the lines that once defined and separated each.

So, too, have the characteristics of vocational students grown increasingly broad. The age span has widened to include adults at any age who are training or retraining to enter new occupational fields. Classrooms are no longer limited to secondary schools and postsecondary technical schools. Now the classroom is likely to be in the community, and most certainly in community colleges. The shift from enrollment in high school vocational programs to postsecondary technical education is clearly reflected by the parallel shift in governmental expenditures.

In planning for the future, vocational educators must now consider the special needs of diverse student subpopulations and decide how and which vocational curricula can most effectively help students make a successful transition from education to work.

APPENDICES

Individual Study Activity Responses

GOAL 1

4. Historical definition of vocational education compared with current definitions of vocational education

Smith-Hughes	Current
1. Vocational education is under public supervision	1. Vocational or technical training in schools or classes under public supervision or under contract with state board or local education agency
2. Major purpose is to fit individuals for employment	2. To prepare individuals for gainful employment as semi-skilled or skilled workers, technicians, or subprofessionals in recognized, new, and emerging occupations
3. Begins after 14 and provides education below college level	3. Includes guidance and counseling, job placement and follow up, teacher training
4. For individuals who have entered or are prepared to work on farms or in trade and industry	4. Excludes occupations requiring a baccalaureate or higher degree
	5. Includes preparing educators to meet vocational needs of special student groups

5. See responses to item 4, Goal 1 in the Self-Check Responses

GOAL 2

1.

Basic Purposes	Philosophic, Economic, and Sociological Concepts
1. To meet labor needs of society	a. Public education is a means for obtaining employment b. Trained workers are needed for national economic growth c. Work has value to the individual and to society
2. To increase options available to each student	a. Career decisions involve gaining information needed to make job selections b. Develop human resources while promoting educational development of individuals c. Characteristics of students must be considered in light of occupational aspirations and preparation
3. To motivate all types of learning	a. Schools are responsible for developing individuals with skills to obtain and continue in successful employment b. Programs should allow for economic shifts through retraining and training in new occupations c. Quality of life depends in part on providing opportunities for individuals to learn skills, to develop pride in work and feelings of self-worth

Self-Check

GOAL 1

1. What were the main characteristics of vocational education as defined by the Smith-Hughes Act of 1917?

2. How is vocational education currently defined?

3. What is meant by the phrase "the context of vocational education"?

4. Describe the relationship between vocational education and general education; career education; and postsecondary education.

5. In recent years what special student subgroups has vocational education made particular efforts to serve?

6. What relationship is being developed between vocational education and other federally funded training programs?

GOAL 2

1. What philosophical concepts have been presented to justify the need for vocational education?

2. Describe the major economic concepts that have influenced the inclusion of vocational education as an integral part of public education.

3. Which statement best describes the sociological foundation for vocational education?

   ____ a. Vocational education is one way to improve the general standard of living of many people.

   ____ b. Work is important to our society only from an economic point of view.

   ____ c. There is strong evidence that vocational education has greatly reduced juvenile delinquency and adult crime rates.

4. What are the three basic purposes of vocational education?

5. List a major contribution of vocational education in each of the following areas:

   a. Contributions to labor needs

   b. Contributions to educational relevancy and innovation

   c. Contributions to reduction of contemporary problems such as unemployment

6. In what problem areas can vocational education contribute in the future?

GOAL 3

1. What broad categories of people are typically served by vocational education?

2. Over the last 15 years the total enrollment in vocational education programs has:

   ____ a. increased slightly

   ____ b. more than quadrupled

   ____ c. decreased

   ____ d. remained the same

3. Enrollment trends over the last ten years show that the greatest rate of increase has been at the:

   ____ a. secondary level

   ____ b. postsecondary level

   ____ c. adult level

4. What have been some of the problems in collecting reliable enrollment program and expenditure data in vocational education that are comparable throughout the nation?

5. What are some of the uses of reliable data to vocational educators?

6. Which statement accurately describes the comparison among federal, state, and local expenditures for vocational education?

____ a. The federal government provides the majority of funds for vocational education programs.

____ b. State and local expenditures have consistently exceeded federal expenditures.

____ c. For every federal dollar spent, more than seven state and local dollars are expended.

Self-Check Responses

GOAL 1

1. Main characteristics of vocational education as defined by Smith-Hughes:

   (a) vocational education is under public supervision

   (b) major purpose is to fit individuals for useful employment

   (c) begins after age 14 and provides education below college level

   (d) for individuals who have entered or are preparing to work on farms or in trades and industry

2. As currently defined, vocational education:

   (a) is under public supervision or under contract with a state board or local educational agency;

   (b) is designed to prepare individuals for gainful employment and/or for enrollment in advanced technical education programs;

   (c) does not include education for professions or occupations that require a baccalaureate or higher degree;

   (d) is designed to train or retrain individuals for employment as semiskilled or skilled workers, technicians, or subprofessionals in recognized, new, or emerging occupations; and

   (e) includes the development of effective work attitudes and interpersonal skills to gain and maintain employment.

3. Context of vocational education includes the environment in which it is found (institutions, schools, agencies, etc.) and its relationships to other kinds of education (general, career, adult, etc.)

4. Relationship between vocational education and

   (a) general education: both are important for job success, contribute to general development of the student, may serve as a culminating experience for students leaving school, and may serve as a background to further training and education

   (b) career education: both emphasize preparation for work as a basic goal of education; vocational education is an integral part of the preparation phase of career education

   (c) postsecondary education: includes major institutions providing vocational training at higher than entry-level skills; for retraining adults making mid-career changes; for training in newer, highly technical occupational areas

5. Special student subgroups include:

   - disadvantaged (educationally, socioeconomically)
   - handicapped (physically, mentally)
   - limited English speaking
   - older adults
   - women, especially to encourage enrollment in nontraditional areas

6. Relationship between vocational education and other federally sponsored training programs includes:

   - coordination between state and local manpower agencies (Comprehensive Employment and Training Act, Youth Employment and Demonstration Projects Act) and vocational programs
   - collaboration and articulation of programs within local communities to eliminate duplication of efforts

GOAL 2

1. Philosophical concepts justifying vocational education include:

   - schools need to serve the entire student population, academic and vocational;

- educational leaders have long identified career development as a major educational objective;
- society views schools and public education as a means to obtain employment;
- schools should provide utilitarian as well as liberal education.

2. Major economic concepts influencing the inclusion of vocational education as an integral part of total education include:
   - trained workers are needed for national economic growth
   - educational development of workers is vital to wise use of human resources
3. a
4. Three basic purposes of vocational education are:
   - to meet labor needs of society
   - to increase options available to each student
   - to serve as a motivating force to enhance all types of learning
5. Major contributions of vocational education include:
   - development of job skills to meet labor needs of society
   - expansion of land-grant colleges to serve as schools for professional training of vocational educators
   - individualized instruction and competency-based methodologies
   - cooperative education
   - use of national, state, and local advisory councils
   - growth of strong youth organization movement
6. Future contributions of vocational education may include:
   - improving the quality of the environment, urban redevelopment, mass transportation systems, promotion of energy conservation

- providing opportunities for every adolescent to have actual work experience
- providing special student groups with skills to enter a great variety of occupations
- providing better education and placement for the handicapped
- providing training and retraining for highly technical occupations and new technologies

GOAL 3

1. Broad categories of people served by vocational education include:
   - in-school students (mid-teens to mature ages; all levels of academic abilities; functionally illiterate and non-English speaking; military and incarcerated persons; socioeconomically disadvantaged; handicapped)
   - out-of-school group (unemployed and employed; individuals requiring updated and new skills; apprentices and persons in on-the-job training programs; trainees in union and industry-sponsored programs)
2. b
3. b
4. Problems in collecting reliable national data about vocational education include:
   - lack of consistent definitions for programs, vocational students, completers, etc.
   - inadequate follow-up of student placements
   - diverse funding disbursement patterns
   - inadequate assessment of local employment needs
5. Uses of reliable data include:
   - effective short- and long-range planning
   - deletion of old or addition of new programs

- elimination of duplication in local program offerings
- assessing program effectiveness and evaluating successful vocational education programs

6. c

Recommended References

1. Bailey, L. J., & Stadt, H. Career education: New approaches to human development. Bloomington, IL: McKnight Publishing, 1973.

2. Grant, W. V., & Lind, C. G. Digest of education statistics. Washington, D.C.: Government Printing Office, annual publication.

3. Thompson, J. F. Foundations of vocational education: Social and philosophical concepts. Englewood Cliffs, NJ: Prentice-Hall, Inc., 1973.

4. U.S. Department of Health, Education, and Welfare. Summary data: Vocational education (Fiscal year 1976). Washington, D.C.: Government Printing Office, 1978.

5. Youth unemployment: Solving the problem. Arlington, VA: American Vocational Association, 1978.

VECS Module Titles

Module 1: Vocational Educators and Curriculum Management

Module 2: The Scope of Vocational Education

Module 3: Organization of Vocational Education

Module 4: Legislative Mandates for Vocational Education

Module 5: Priorities in Vocational Education

Module 6: Vocational Education for Students with Special Needs

Module 7: Vocational Needs Assessment and Curriculum Development

Module 8: Conducting Task Analyses and Developing Instructional Objectives

Module 9: Selecting Instructional Strategies and Assessing Student Achievement

Module 10: Relating Learning Differences and Instructional Methods

Module 11: Selecting and Preparing Instructional Materials

Module 12: Evaluating Vocational Education Curricula

Module 13: Conducting Follow-Up Studies and Communicating Evaluation Results

Module 14: Managing Vocational Education Programs

Module 15: Preparing for Curriculum Change

Module 16: Staff Development